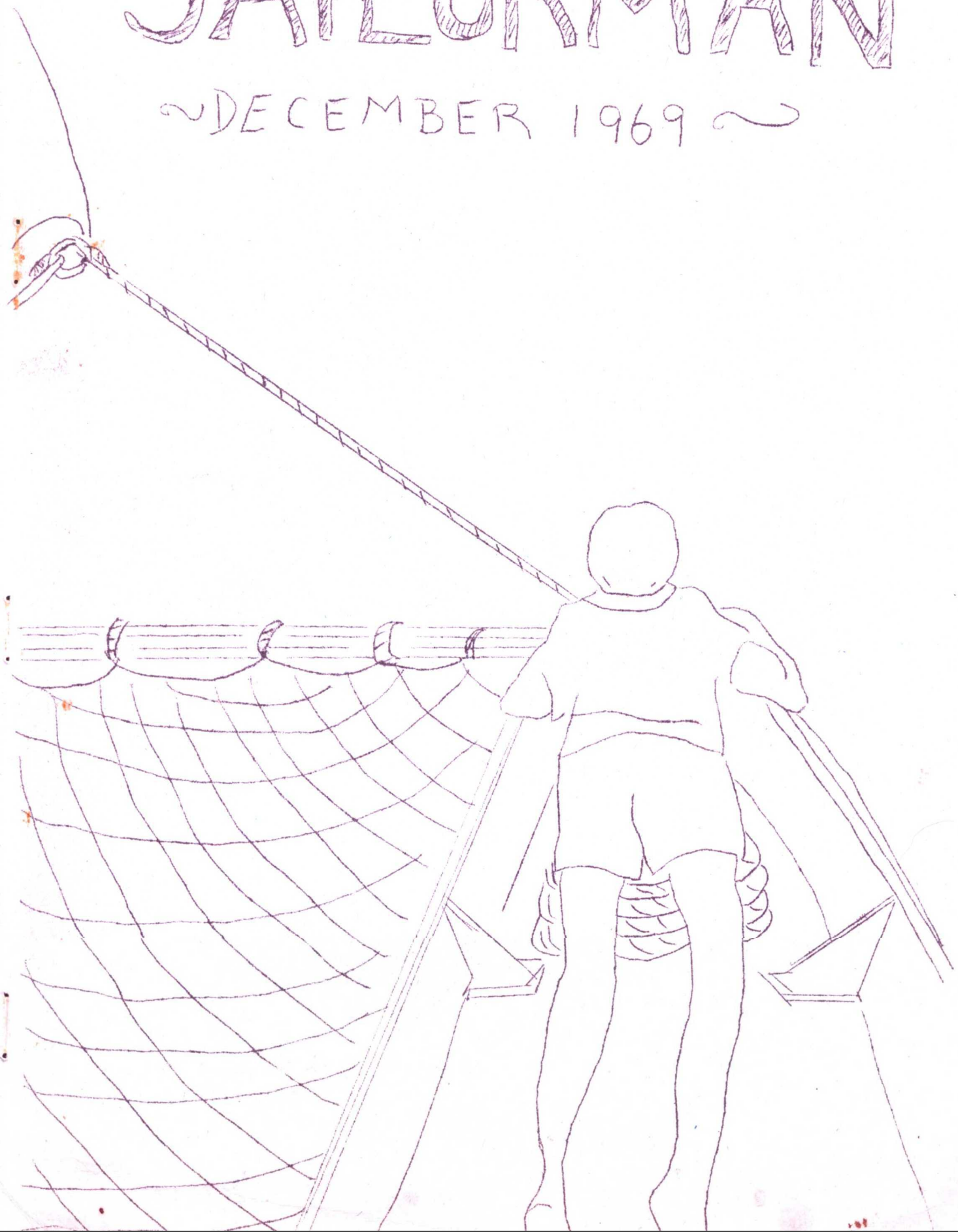
No. 5

THE SAILORMAN

~DECEMBER 1969~



EDITORIAL

I had hoped, very much, to be able to report "TEHINI'S" departure in this editorial; for which reason I have postponed writing it until the last minute. However, I can wait no longer, and will have to tell you the news I tell our friends and neighbours in Deganwy each day - Jim Wharram and his family are at last ready to go, and "Tehini" only waits for a fair wind and the prospect of a day or two of settled weather, to set sail out of the estuary.

Everyone has tremendously enjoyed building "Tehini", but it has been exhausting work - long, sometimes hard, and uninterrupted for over a year. Consequently, as the calculated time of departure - September - came and passed and the ship was still unfinished, the crew began to realise how exhausted they were, and not at all in trim for a long sea voyage.

"Tehini" was launched on 11th September, and had her first sail on 13 October. About a month ago, when the constructional work was all finally completed, everyone was able to begin to relax. We moved from "Rongo" onto "Tehini". Life toom up a new rhythm as the storage and stowage of personal possessions and food for the voyage began. Meanwhile, we had several trial sails, unfortunately, all in light winds. These allowed the crew to gently get the 'feel' of the ship, and her experimental junk rig. However, they put neither through their paces to an extent which would justify Jim in putting to sea in anything but the best conditions.

A few weeks ago, Jim at last began to feel that ship and crew were ready for the sea. Ever since then the weather has been consistently bad. There have been times when several people have advised him to go - not to wait any longer, to set sail while the going was apparently good. Each time, a few hourslater, conditions at sea have worsened, and all who wish him well have been glad he did not take the advice.

Jim plans to sail first to Cork in southern Ireland. There he will wait for favourable winds to set sail for the Bay of Biscay. He wants to arrive in Cork with a crew encouraged by their first taste of the sea for over a year - not exhausted and demoralised by a hard struggle against unfavourable conditions, in a comparatively untried boat.

These are the reasons why Jim still waits on Deganwy beach. I have gone into them quite fully because I'm sure most builders are eagerly awaiting news. I am glad to say that at the time of writing, the long-range weather forecast is much more hopeful. "Tehini" may yet be away before you receive this "Sailorman".

I have said nothing about "Tehini's" performance. From the time of her first sail, everyone has been delighted with her, and only minor alterations have had to be made. She is a beautiful ship - long and low in the water, she looks very delicate, but is nevertheless very strong. With her black hulls, red bulwarks, and orange and yellow junk sails she is a magnificent sight, and a joy to look at. Inside she is spacious and the warmth of the wood is everywhere, for there a no painted surfaces, and the wood "speaks for itself", as the designer planned.

It is time I introduced your magazine. May I say that you are lucky to have it, considering that apart from a few short pieces of information, and the contribution of Mr. Nico Boon, I received nothing for this issue without writing to ask for it. Please see your last "Sailorman" editorial, and you will understand why I am puffing and blowing somewhat! I happen to know a few builders with possible stories to write, and they were very prompt in replying to my requests (thank you very much, all those concerned). Think of all those of you I don't know about, who may have similar or different stories to relate? Please, please start writing for the next issue NOW, and send it off NEXT WEEK, and then I can get the next issue (a) ready on time, and (b) full of stories and information. To quote myself, this magazine can only be as good as you make it. If you sit back and do nothing, there may not be another "Sailorman". So, if I may say so - be warned, and start w itng!

LESLEY SCRUTTON.

Any correspondence should be addressed to:-

Miss L. Scrutton,
S/C Rongo,
Poste Restante,
Deganwy,
N. Wales.

Further information on "TEHINI" will be found on pages 2, 4, 8 and 18.

Stocking up "TEHINI"

I don't know how many builders are contemplating long sea voyages in their completed craft, but details of food, and other supplies, and how they have been stored and stowed in "Tehini" may be of general interest.

Tinned Food. A great deal of this is being taken, including fruit, rice, sponge puddings, milk, meat, prawns, tomato puree, soups, and fruit juices. The labels on the tins have been removed, and a code number painted on them. They have been greased with either vaseline, or petroleum jelly (which is half the price of vaseline in large tins at Boots the Chemist). We stowed the tins in rows in netting shelves on either side ot the backbone, in the bilges. There is a paragraph on how to make netting shelves at the end of this article.

Containers: The follwing firm supplies excellent plastic containers of all shapes and sizes:- W. C. B. Containers Ltd., Stamford Works, Bayley Street, Staleybridge Cheshire, SK15, 1QQ.

We bought twenty containers the size of a large bucket with tightly fitting lids. These are invaluable for storing such things as flour, milk, powder, cartons of margarine, salt beef and sauerkraut.

We also bought dozens of strong plastic bags in which packets of food, matches, and countless other items can be kept.

Eggs, other bulk foodstuffs and their suppliers: 50 dozen eggs are being taken, as well as three large tins of egg powder. The eggs have been greased to preserve them. We found this the simplest and best method we could discover, and it remains to be seen how effective it is. The eggs are all fresh free-range farm eggs from a local farm as we much prefer these to the eggs produced by battery hens. The powdered egg will be used for omelettes and in cooking.

Large quantities of dates, sultanas, apricots peanuts, soya beans, wholemeal flour, oats, and yeast, as well as orange and grapefruit juice, have been supplied by: W. Prewett Ltd., Stone Flour Mills, Horsham Sussex.

They will only take a few loaves of bread with them. When these are eaten, they will bake bread frequently. There is nothing like home made breade, so I give Ruth's recipe at the end of this article. If you haven't experimented yourself, I recommend you to try. I'll be surprised if you go back to the sponge-like substance that passes for bread in most shops today.

We are great ones for buying in bulk, even when not embarking on a long voyage. 61 lb. tins of delicious honey, at 1/- a lb. can be ordered from: Ranolan Health Foods Co., Wargrave-on-Thames, Berkshire.

Also, large tins of delicious peanut butter from: Mapletons Foods Ltd., Moss Street, Garston Street, Liverpool, L19 2NA.

Have you tried honey on top of peanut butter on bread? Its delicious.

A large sack of wholewheat grain is being taken. This is going to be used with the flour, in bread making ($\frac{1}{3}$ of wheat grain to $\frac{2}{3}$ flour), and also it makes a delicious porridge. First it must be ground. We found the best method was to use a coffee grinder. Then, soak it over night, before cooking it over a slow heat, stirring continually until it reaches a suitable porridge-like consistency.

The grain can be sprouted, as can soya beans, and many other kinds of beans. Hannes Wharram has written down the method which I include at the end of the article.

Meats: Salamis and smoked pork sausage have been obtained from:- Mattesons Meats

Ltd., 2 Janson Rd., London, E.15.

They are taking 70 lbs. of salt beef with them. We found the recipe which is at the end of the article in an old book, after trying without success to find someine who knew about the process and could tell us how long the meat would last. So a further report will come in a future "Sailorman". This, and 20 lb. of bacon will provide the main meat in the diet. Some tinned meat is in reserve if the beef should not keep, or should supplies run short.

Cheese: is another important item. Stocks include several Dutch cheeses, and cheddar cheese in large quantities. They are taking plenty of pickles, sauces, cream crackers and sardines, all but the last can be ordered from: Lloyd Rakusen & Sons Ltd., Leeds 7.

Vegetables: Several sacks of potatoes, and large quantities of carrots and onions. Very good quick dried peas, similar to "surprise" peas, are obtainable from:- Nestles Co. Ltd., St. Georges House, Croydon, Surrey.

These are the main stores, besides such basic requirements as tea, coffee, brown and white sugar, salt (sea salt from a local health food store) and peppercorns. Jim Wharram's mother has baked quantities of fruit cake, and made pots and pots of jam.

Recipes: I mentioned sauerkraut earlier. This is home made quite simply. It will provide a fresh taste at sea, much needed to supplement the day-to-day diet, and more important, it is a source of vitamin C.

Sauerkraut: Ingredients: firm white cabbage heads, salt and peppercorns.

Remove the bad outer leaves. Cut the cabbage in half. Cut out the hearts, and slice the cabbage in fine shreds, and have a clean barrel or stone har (or plastic container) ready. Place whole cabbage leaves over the bottom of jar and then pack on a layer of sliced cabbage. Strew with salt and peppercorns, and pack on another layer, and so on until the cabbage is all used up. Stamp it down firmly, so the liquor from the cabbage will cover it, then cover with a clean piece of muslin, a board, and a stone to hold it down with. Look at it occasionally pressing it down, and cleaning the board, cloth and stone. After the cabbage has fermented enough, which you will know by its sour odour, put it in a cool place.

Bread: Ingredients: $2\frac{1}{2}$ lb. wholemeal flour, Salt to taste, $\frac{1}{2}$ oz. dried yeast, 2 tspoons sugar, 25 oz. water.

Put the flour in a basin to warm, with salt mixed in. Put yeast in a small bowl, add sugar and cover with some of the water (which should be tepid - too hot it will kill the yeast), and leave in a warm place to rise.

When the yeast is ready, add it to the flour and the rest of the water and knead for a short time. Return to basin and leave to stand in a warm place until it has doubled its size (app. 45 mins). Knead again for a few minutes and form into loaves. Place in tins previously warmed, greased and floured, and leave to rise in a warm place for 5 minutes. Put in oven (app. 450°) and bake for about 30 minutes. N.B. In cooking at sea, $\frac{1}{3}$ sea water to $\frac{2}{3}$ of fresh water may be used. In this case no salt need be added.

Salt Beef: Dissolve salt in fresh water till a potato floats. Add one ounce saltpetre to 4 gallons of brine. The meat, boneless, and without fat if possible, is cut into pieces and put in the brine. Any fat that floats to the top should be removed each day. Cover container with a slab of oak (this does not squash the meat, but covers it completely and keeps it under the brine).

The recipe tells you to test it and add more salt if necessary after 14 days. We found that the water became very bloodstained almost immedietly and changed the brine frequently until it was clear, which probably comes to the same thing as testing it. Before cooking, soak it in fresh water, one hour for each day it has been soaking in brine, up to 24 hours. Renew the water several times if soaking it for several hours.

Hannes Wharram's method of sprouting beans: Moitessier growns beans on his voyages to supply fresh V.C. I tried it and found the best thing to grow them on is plastic trays, that can be bought from any garden store. Put wet cloth in the bottom of the tray, and just sprinkle the beans on fair ly well spaced out. The trays can be stacked on top of each other to save space. While growing, the rag beneath the beans must be kept wet, and they must be kept dark. They take about twelve days to grow but can be left longer.

Ropes, netting, charts. To make netting shelves, hammer small nails into the backbone at intervals, near the top edge, and into a hull stinger at the same level

opposite, and sling the netting between. Leave a good dip in the middle, so that the tins rest as low down as possible without touching the bottom. Thus air can circulate around them, and other food containers can be stowed above them.

Whilst on the subject of netting - netting shelves are extremely practical in all sorts of places on the ship - in cupboards, to hold clothes and other belongings, in the bilges, and in lockers, where they can be used to store fruit and vegetables and other food supplies. This is quite apart from the use of netting as an extension of the deck, beyond each end of the slatted platform, stretched between the inner bulwarks and the "Netting Beam".

We have obtained quantities of courlene netting from: Cosalt Ltd., 196-216 Dock Street, Fleetwood.

An alternative to netting is webbing, and beautifully strong. It is much less uncomfortable to walk and sit on than netting but it is also much more expensive. We were lucky to be given some for "Tehini". It can be made to given measurements. In case you are interested the address to write to is: Dykon Ltd., Clowes Street, Macclesfield.

Lanyards, anchor warps and halyards were obtained from: British Ropes Ltd., P.O. Box 31, Warmsworth Hall, Doncaster, Yorks. and stays from: Bristol Wire Rope Co. Ltd., Montague Street, Bristol, 1.

I will also mention here a source of charts (11/- each) and a very useful book "Ocean Passages of the World" (60/-) from:- Dubois-Phillips & McCallum Ltd., 8a Rumford Place, Liverpool.

I hope the above information and addresses are of interest, and perhaps use to you. Drop me a line if there is anything else you would like to know, or if you have any queries or criticism of what I have said.

LESLEY SCRUTTON.

Tehini Junk Rig

Many polynesian catamaran builders are interested in the Junk rig, and owing to the great demand for this rig, Jim has designed junk rigs for Tehini, Oro, Narai, and Tangaroa. A few words therefore on how we found Tehini's Junk rig should be interesting to all.

The rig had a few Chinese surprises for us, and we stress that it is a highly balanced piece of engineering (see article by J. P. Aubry in last issue) a precision instrument, and not, as it has laughingly been called, a patched up bag of washing with bits of string stuck all over it. It is easy to laugh at something apparently strange and alien, but us erude westerners would do well to remember that the Chinese had attained a high level of civilisation when we were still barbarians.

Following are some examples of the need for precise positioning of ropes on the Junk Sail.

1. Where the halyard was attached to the yard had to be a precise position of balance, so that as you hoisted on the halyard, the yard rose up at the right angle, instead of the head of the yard hanging down like a broken arm.

2. If the lazy jacks or topping lifts were not in the correct position on the boom, the yard would catch on them and jamb halfway up.

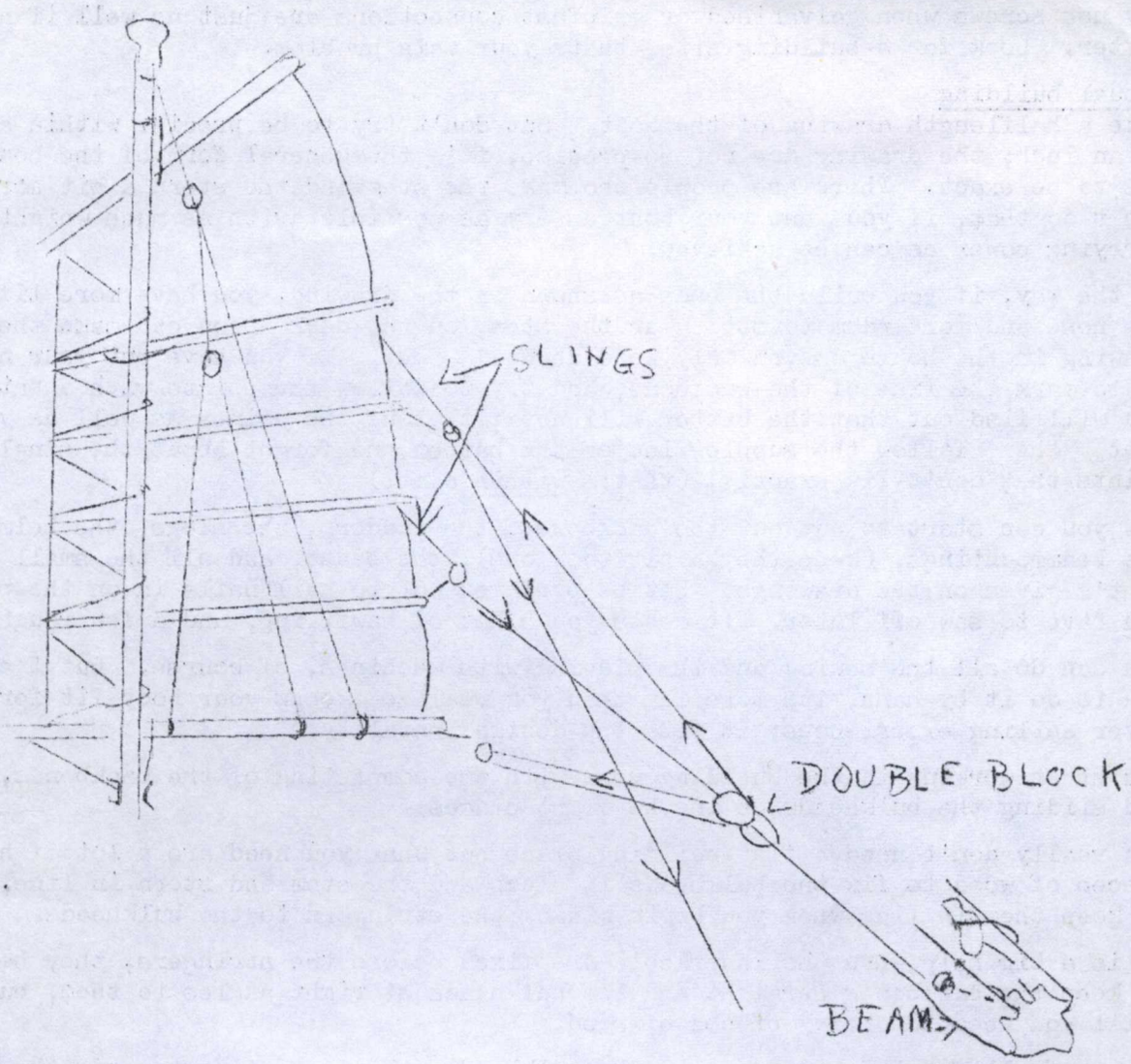
3. The position of the topping lifts also had to be precise on the boom so that the boom or foot of the sail did not sag down when the sails were lowered in the topping lifts, because for efficient reefing - the whole point of the Junk Sail - when the battens are lowered, they have all got to be precisely in line.

4. Slings from batten to batten to which the sheetlets are attached have to have precise length, again found by trial and error, so that when the sail is reefed to any of the battens, by pulling on the sheet it holds the reefed sail in a neat bundle.

Colonel Hasler has always said that one of the advantages of the Junk Sail is that one can use extra thin rope for all the ropes. We found that though in theory Haslers ropes are strong enough in fact they are too thin to be comfortably worked with the bare hands. (Hasler uses winches).

Colonel Hasler has also used a 5 batten sheetlet arrangement. This we found cumbersome, and having observed on certain Chinese Junks a 4 batten sheetlet arrangement, we tried it out on the Tehini main of 500 sq. ft., found it perfectly easy to handle, requiring less rope, and the double block needed for the euphroe is obtainable from any yacht stores, whereas a treble block or 3

single blocks is more expensive.



Attempts to use friction blocks, i.e. solid blocks of wood with holes bored in them, was not successful in our case.

For battens we have used bamboos. Small 10-12 ft. bamboo's are reasonably easy to obtain from carpet shops, but our larger bamboos 18 ft. by 1½ to 2" in diameter, had to be obtained from an importer - address below.

The sail was lashed to the battens by lashings from eyelets about every foot along the width of the sail, corresponding to traditional reef points. A small hole was bored at either end of each batten and a lashing from the ends of the sail passed through them to prevent the sail slipping along the batten.

So far, after some trials, we have found this Junk Sail a very easy sail both to handle and reef - this being our object in using it for our proposed voyage, the length of which makes an easy-to-handle and reef sail of great value.

Having fulfilled our primary object we have also found that the Junk Sail sails surprisingly close to the wind - in tests we have registered Tehini as sailing 4 points off the wind, though she picks up speed when allowed to free off a little. This ability to sail close to the wind will come as a surprise to many people who consider themselves an authority on rigs, indeed many of them will consider it impossible.

by NUALA MACDOWELL.
with reference to skipper Jim.

BUILDING A HINA

Why choose a hina? Because thats the boat to build. A boat to be used by cruising men, fishing men, swimming people, diving fellows. Or just to be used for sunbathing, may be not in Northern Europe. I think you can call the hina a general purpose catamaran, but not a racing type, very useful for sailing schools too; for rough water training.
How to make a success of your building time.

Preparation. Study the plans till they start to live for you, read the texts, general books on boatbuilding like "build your own boat" by Percy Blandford. Buy

the materials, but have a good look, - the differences in prices are surprising. Why use screws when galvanised or gripfast connections are just as well if not better. Look for a building site, thats your main problem.

Actual building

Make a halflength drawing of the boat. But don't try to be precise within a 16th of an inch; the drawing are not so precise; it's the general form of the boat that has to be exact. There are people who make the stem and the stern a bit more slim. Don't do that, if you want your boat as dry as possible, with as much weight-carrying power as can be achieved.

By the way, if you build the ends as shown on the drawing, you have more lift in the nose and more room to sit near the stem, on the deck. You can make the drawing in the house as you only need about 12 feet. If you have put your nails in to mark the line of the backbone, and try to follow the points with a batten you will find out that the batten will not fit along the points as well as you want. Then, follow the supple line of the batten and forget about the single points that don't fit exactly, (that's within a mm.)

Now you can start to cut out the backbones, the rudders, the skegs, the helms, the beammountings, (keep them a bit too long), the beams, and all the small stuff, that's given on the drawings. But be prepared not to nail nails in on the places you have to saw off later. It costs you a lot of sawfiling, and a few rough words.

You can do all the sawing and the planing with machines, of course. But I advise you to do it by hand, its more fun than you realize, keeps your body fit for your later sailing experiences; it fits the design mentality.

You start working in the building room with the completing of the backbones, and sliding the bulkheads on in the right places.

You really don't need a flat building place but what you need are a lot of heavy pieces of wood to fix the bulkheads in place and the stem and stern in line, And to keep them in line when you begin fixing the stringers to the bulkheads.

It is a big help when the innerkeels are fixed before the stringers, they help to keep the backbones straight and the bulkheads at right angles to them, but still you need the heavy pieces of wood.

First of all fix the stringers to the bulkheads, then bend them towards the stem and the stern. Keep the, a bit too long, say half a foot, they will not split when you hammer a nail in or use a screw. That's about the only place where you can use a screw, though it can be done with a nail, but then you have first to grip the two parts together with a clamp. Use a heavy piece of iron behind the wood to ease the hammering.

For the hullply you can use scarphs, but don't do it; it is quite a work with a very sharp plane, with the bigger boats it impossible to fix the sides of the hull in one piece without a lot of people helping, or you have to glue the scarphs in place. Then you have problems in clamping them enough. Start planking the hull from the middle, you have the buttblocks then just inside the bulkheads to the middle of the boat, the flattest part of the hull.

Do be precise with the mixing of the glue and hardener. Why not always weigh it? The best glue so far is Aerodux 185 with hardener 150. It is more expensive than Aerolite 306, so you can only use it for the outside of the hull if you want. It gives a darkbrown colour.

The building of the boat is not difficult, I want to say simple, but be careful, measure trice for it is easier to measure trice than to saw twice. If you ask me what is the most heavy work; it is the planing of the innerkeels, the stem and sternpieces, and the fixing of the bulwarks. The skegs must be fixed strongly enough to withstand any sea, but not strong enough to withstand rocks; this will cost you a part of the keel, instead of you losing only the skeg.

Skegs, and outerkeels finished and planed, you have to treat the boat with antirot-material, and groundpaint before you turn her.

Fix all innerparts now and paint the interior before doing anything with the deck construction. Its enough to treat the watertight compartments with antirot.

The contours of the deck are nearly flat, this is not too difficult to plane, but first saw off most of the plywood, plywood is very rough for a plane. The bulwarks give the lines to the ship. You know, the hina has the lines of a ship, you cannot say she is a dinghy, those bulwarks are really marvellous. They give a lot of living room, sunbathing place, to put your anchor on, paddles, and so on. They permit you to crawl forward if necessary, hand over knee, in any condition of the sea.

The actual building time was about 600 hours, including the hours of thinking and discussion with friends about small details, how to construct small cabins instead od the original hatches, what kind of maststep to fix, how to fix the jibstay. If you use the best materials you can buy, better a bit too heavy than too light, then you are about £250 poorer, a nice ship richer, may be, a few pounds lighter on the scale, too.

Small detials. Fix the beammountings with bolts to the deck stringers where you can, as well as glue to the deck. Fix the standing parts of the beammountings to the oak stiffeners with bolts as well, especially where they are not fixed to the bulwarks.

Don't fix the beams too stiffly inside these beammountings. At the end of the season, the wood is swelled, you will find out what a problem it is to get them out again. When you keep them free from the sides of the beammountings about 1/8 inch each side it is not too much, a bit more is better.

Putting the hullply on, be careful not to bend the deckstringers down by pressing the ply round the hull. You have to plane quite a lot of wood afterwards besides destroying your plane by touching the nails by doing that.

The second advice is not to nail the ply to the deckstringer too near the deck edge of the stringer. You certainly forget that at times, so learn to sharpen your tools, planes and chisels, and saws.

You can prevent the deckstringer bending down by temporarily fixing a piece of wood on the inside on the stringers from deck to keel. Keep the bottomboards in the cabin, if you make these a bit too narrow so that they never touch the sides. These sides move a bit in rough water. They have to.

Fix the rudder pintles with the longest screws you can get. They must never give.

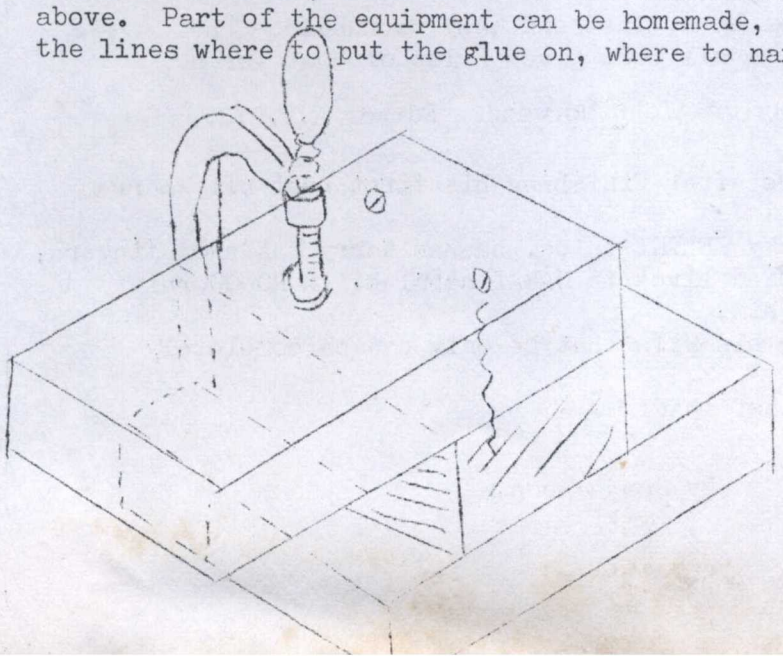
Fix short ironstrips under the skegs passing the distance between the skeg and the rudder, otherwise you will find out how much mooring lines you will fish from the bottom, or nets, or the like. Fix preventers to the rudder, so that it will not come off when it touches the bottom.

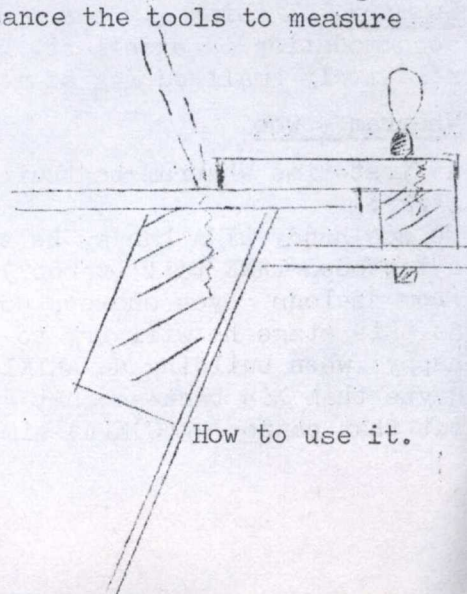
Let the mast stand in a hollow in the maststep, in such a way that you don't have to put a small piece of wood beneath it. Keep the mast whole. Keep the mast whole at the top too. Why not use eyesplices to fix the stays and the haliards. Keep the things simple" must be always in your mind. It is the cheapest way as well

Fix the mainsheet block to a piece of terylene taken around the stempost just above the deck. You can reach each point you wish to lead the sheet from , by taking a bit of line in or out. Easy, and simple too.

Equipment. As I said before you can use electricity, but why? You are not in a hurry. Boatbuilding is a way of living; sailing is. Living goes fast enough of itself, To work with your own hands gives a feeling of accomplishment mechanical equipment never gives. But you need tools. I make a list here that gives just enough.
Workbench. Saw, not too small not too big, for ply and wood. Tenonsaw, for shortening stringers, or sawing ply. Smoothingplane (Stanley) Two chisels 3/4 inch and 5/4 inch Combination oilstone, sawfiles. Breastdrill with drills and screwdrivers. Hammers and nailpunches, for each type of nails. Heavy piece of iron, or sledgehammer. Folding rule, steel square, adjustable bevel, plumb bon. Rubbing blocks, paint brushes, surform or tool like that. As much cramps as possible. (say eight).

Believe me or not, the Tehini was not built with many more tools, than those given above. Part of the equipment can be homemade, for instance the tools to measure the lines where to put the glue on, where to nail.





How to use it.

If your boat is finished you only need the fenders to keep your paint nice. Take scootertyres for it, they don't roll so much as the ordinary types of fenders. They are cheaper too. Again the best thing is not the most expensive one.
I wish you success in building and sailing.

NICO BOON.

A TRIAL TRIP IN "TEHINI"

On the 20th October last, Pat and I having seen the sailing at Weir Wood, were on our way to Ireland. A previous letter to Jim Wharram had warned him of our impending descent upon him, and we were sitting in a cafe watching a boat sailing in the sunlight which we soon realised was no less than the celebrated "Tehini" herself.

We watched her head towards Deganwy, and going down to the beach were soon spotted and picked up. By this time the wind had dropped and we motored out in the sunshine.

Unfortunately the wind never did pick up and our maximum speed with one puff was four knots, during which the wind was so light that a lighted match was not blown out. We sailed round a bit in the slightest of zephyrs.

When we were describing the first of Jim's new designs in the AYRS we noted the fact that the level platform between the hulls were suitable for day sailing parties and for gales in the ocean - not that I should want to be in "Tehini" in a gale or that matter any other yacht in a gale. To be sitting on the bridge under the blue skies, as a large party talking and being sociable in the warmth of the sun - picnicing too - seemed so much more pleasant than squatting in the hulls and corners of a catamaran with a large "kennel" on the bridge deck. Jim actually has a large tent for putting on the bridge deck if he is becalmed in the Tropics or elsewhere, and the accommodation inside this must be superb.

Accommodation in the hulls. Each one has about 7 ft. of headroom over a length midships of some 8 to 10 ft. Fore and aft of this centre part are two cabins each with a 4 ft. berth stretching right across it and with about 4 ft. 6 ins. headroom. Thus, Jim has not tried to cram multible berths into "Tehini", but has rather gone for maximum comfort for a few people.

Handling "Tehini". "Tehini" handles well and answers the helm quite positively even in the lightest of winds. Putting about was good but needed the jib to be backed in the extremely light wind. With these long hulls the centre of effort moves aft as the speed falls below two knots and tacking is sluggish. In stronger winds there is no problem.

Reefing and furling the Chinese Type Sail. I had never sailed with this rig before and was amazed at the simplicity with which simple slackening away on the main halyard reduces the canvas either by one batten or altogether - whilst hoisting the halyard resets the sail.

Jim's masts are stayed at the top and should not suffer the fate of the unstayed masts of other boats, such as "Galway Blazer", "Ilala" etc., In this connection I rather suspect that the Chinese unstayed mast took the halyard to the weather side of the boat on a long tack in order to steady their unstayed masts, and wonder if the reason for the loss of masts with this rig could be due to not doing so.

Summary. I think Jim has a delightful boat, fast and easy to handle. The accommodation is excellent, and the overall cost gives a lot of boat for a relatively small outlay of money.

By Dr. John Morwood. Editor A.Y.R.S.

Wharram - woe

A first-time Wharram boatbuilder shows after finishing his first boat all Wharram Marks:
He has handy HINA hands, he tells talky TEHINI tales, he has tarry TANGAROA fingers, a tattooed TANE tail (taboo?). His mind lives in NARAI nebulae. A RONGO rain from jealous eyes showers down upon him.
At this stage he will try to convince his wife that he only can be completely happy, when building an ARIKI.
Maybe than his bank-account gives a last 'MAUI'.
But that cannot RA(C)K(A) him.

By Sonja Boon.

DUTCH INTERLUDE SEPT.-OCT. 1969 By John Leach

Friday, 12th September, the evening was very calm and foggy as "Ngataki" slowly slipped down the river Orwell from Ipswich. The crew this time were Mark, George and myself. Our average age was 22 and we were determined to have a good time. I was given 2 weeks leave from work, Mark Jacked his job in, and George was on the dole. We had a bunk full of food, but not much money between us.

The first episode occured about half a mile down river. The dinghy was being pulled abord when the painter broke, the cat sailed slowly past, I ran aft with the boathook, but Mark had jumped into the dinghy, going right through the bottom. I threw him a lifebelt as he had Wellingtons on. It took about ten minutes to recover everything, but Mark had lost his boots and socks, and got all his money and cigarettes wet.

We had to anchor in the river that night because of the dense fog. Saturday morning we drifted into Felixstowe so that Mark could get some cigarettes. Mark cannot do anything without his fags.

During a break in the fog we set out for our first port - Zeebrugge. Light head winds and fog persisted over the entire crossing which lasted 28½ hours. We heard many ships engines very near to us but never saw the ships owing to fog.

Zeebrugge is very easy to get into, with a wide harbour entrance, protected by two long moles. We spent a couple of days in this interesting fishing port, looking over the trawlers etc. We met more headwinds as we sailed up the coast. Towards evening the winds suddenly increased to force 6, making progress slow and uncomfortable. Rather than thrash about in the sea all night we decided to put into Flushing.

This port is situated at the head of a wide estuary which has a rotary tide. This means that the tide ebbs for eleven hours and rises for one. The channel was well lit, but progress was very slow as the tide runs at 5 knots, There were strong eddies and whirlpools which tended to push the cat all over the place off the entrance to Flushing harbour. Pilot boats were constantly going in and out of the entrance, which was only 20 feet wide. The night was pitch black, the tide low, and the dock walls about 20 feet high covered in slime. I played a torch beam on the wall as we approached a blind corner, We were all tensed up, hoping that a pilot boat would not come face to face with us. When the dock came into view it was empty, but so small that we could not even turn round. By the time the boat was moored up everything was covered in slime, and oil - a common occurance in commercia port.

In the morning we were told to move into a disused dock as we were in the way of fishing boats. The town of Flushing was very quiet. Everybody seemed to be taking it easy, sitting in the sun, smoking pipes and talking. We soon fitted in with the scene. Here we saw out first and last windmill in Holland - if you want to see windmills, don't go to Holland, go to the Norfolk Broads.

After a rest we pushed off once more up the coast, tacking this time in light winds. About mid-day the wind dropped and a shower of rain flattened the sea like a mirror. The sun came out, and as we drifted over a bank a large flock of seagulls indicated some fish about. Fishing is George's weakness, so while Mark and I lay in the sun reading, George threw the lines over. They had hardly touched the water when the fish struck, and four mackerel and one Bass came out on the first pull. George went mad and pulled out thrity more mackerel before we could calm him down. Needless to say, we had fish for dinner, and very nice too.

That night the wind dropped away so we anchored about five miles south of the Goeree L.V. Next morning we sailed past the light vessel at 6 a.m., with light headwinds. As the day advanced, so did the winds. Atmid-day it was blowing six, so the mainsail was furled. The waves were really big now but as we were hard on the wind, the boat steered itself, while we crouched behing the cabin reading books. For the first time we all felt a bit queasy, so it was corned beef and crackers for dinner "just in case."

In the afternoon a large Japanesecargo ship passed us, heading south. It was so new and shiny that I could see the reflection of our sails in its massive sides. Just as it passed astern there was a terrific double bang as though they had fired some kind of rocket over us. We didn't think much about it until the six p.m. shipping forecast gave Thames Force 8 North East, imminent. I looked at the chart and decided to make for the Hook of Holland. We turned round, hoisted the main, and with the wind astern fairly surfed along on the now following seas. It was hard work steering, as we surfed along at times doing 12 knots, calculated with the Walker Log.Mark was doing an Arthur Piver on the helm, as he shouted and hollered as we were picked up by the waves and thrown forward. The wave crests were level

with the tops of the stem and stern posts.

When the coast came in sight we followed it down till we could see the Hook. This is the entrance to one of the busiest sea ports in the world, Rotterdam and Europort, and believe me it looked like London's rush hour, ships everywhere. We just had time to size the place up before night clamped done. Once we had skirted round the mile-long breakwater, the port lay to windward with a head tide as well. The situation looked tricky with all the ships about, but we had to get in. With Mark on the bow to navigate, George to back the jib so we didn't get 'in irons', and me on the helm, we went on the first board. We were doing quite well, nipping in and out of the ships, when along came a large police launch, complete with searchlight and loud hailer. The informed us that we were breaking every nautical law in the book, but were very helpful, shining the searchlight on any obstacles ahead of the cat, then on us, then on all the ships around us, stopping them in their tracks. At the same time the launch was playing cat and mouse trying to get a line to us, but every time we sailed over the shallows they had to wait until we came back on the next tack. Eventually we got alongside and proceeded under their power. The Hook of Holland has no provision for visiting yachts, so we had to endure a stormy night moored to some piles at the mouth of the river. All night we were bashed about by the swell and ship's wash.

Next morning the wind was light N.E. After saying cheerio to George who had to go home by ferry, Mark and I set off once again up the coast, against a light head wind, 30 miles ahead lay Ijmuiden, the entrance to the North Sea Canal, which was our destination. We managed to get abreast of the port by midnight, but the wind died and left us at the mercy of the tide which was on the flood down the coast. It was my watch from 12-4 a.m. I kept taking cross-bearings on Ijmuiden Light house and a flashing wreck bouy, but after a while we stopped making headway, so I headed inshore a bit and dropped anchor.

Next day we rose at the crack of noon to find a nice S.W. breeze, the first decent wind for a week. Ijmuiden harbour was reached in an hour. The harbour consisted of two high moles, circular in shape, enclosing a large area of water giving complete protection. There are no shallows at all on that part of the coast, this making it the best harbour in Holland.

The North Sea Canal is 14 miles long, very deep, and wide enough for a cat to tack in. It runs straight as a die East-West. As we approached the locks, the wind came round dead astern, and with the sun shining brightly, life was good. We shared the locks with a coaster and some very long barges. The little seagull outboard performed perfectly, and impressed everyone , all sail was hoisted, goose-winging out and sailing in style. We were able to relax and enjoy the beautiful scenery. Towards evening we had another incident with a police launch. We were approaching a swing bridge with a big cargo ship at our stern, when the police boat roared up and tried to tell us something in Dutch, which confused us. They were waving their arms about, pointing at everything, and finally pushed us to the bank with their bow. We crashed onto some piles, sustaining minor dam age to the stemposts and bulwarks. After the big ship went through the bridge, they apologized for their lack of English, and offered to give us a tow to Amsterdam. This suited us very well, as the wind had dropped and it was getting dark.

The port of Amsterdam is so big that we would have got lost. We arrived in the city at 8 p.m. and moored up in a little corner all to ourselves, outside the railway station, and right by the main street. Three wonderful days were spent in Amsterdam. Everybody seemed very interested in Wharram catamarans. The first person we met was the Dutch agent for Wharram plans, Mr. Boon. He invited Mark and I to his home that evening to meet the wife and three daughters. The whole family were mad on boats so we soon settled in. We were entertained till the early hours of the morning, and then driven back to the boat through the deserted streets.

The next day a doctor arrived who was building a Tane in a hayloft, a few miles out of town - sorry Doc, I cant remember your name? This Tane was superbly built. The fibreglass sheathing was so perfect I thought it was varnish. The two hulls were shrouded over with a polythene sheet, to stop the woodworms falling out of the roof into the boat. That evening, the builder and his wife took us on a tour of the city, to the cafes etc. It was becoming obvious that we would not be able to contain our holiday in the allotted two weeks. It was decided to keep sailing till the money ran out.

Leaving Amsterdam on Wednesday 24th September, we pushed on with glorious weather and favourable winds, to the end of the Canal, through the locks and swing bridge which mark the beginning of the Ijsel Meer. This was our intended cruising ground. This inland sea used to be called the Zuider Zee. The sea is

very shallow, fresh water and tide-less; ideal, I thought for a catamaran. Late in the afternoon a small steel sloop motored round us taking photos. The skipper who was Dutch, invited us to follow him to his home port which was only a couple of miles ahead. After mooring up in Durgadam we were invited on board his sloop for dinner and beers. What a surprise we had as we stepped on board, for his boat was full up with Haig Whiskey and Booths' gin. Apparently every autumn he sails across to Lowestoft to get his 'winter grog'. He pays ten shillings a bottle, as it is classed as bonded stores.

We stayed in Durgadam that night. It is a sleepy little village consisting of one road which follows the coast, and one pub, which was soon discovered. The day dawned warm and sunny, with very little wind. We drifted along eleven miles to Volendam, which was the next port on the way up the coat. We saw a Hina moored up outiside the last port, with an aluminium wing mast. Volendam looked as if it was made for a postcard scene. It was the prettiest place I have ever seen. We moored up alongside a thirty-foot sloop from Lowestoft called "Jano". Mark and I must have looked a bit famished, for soon after, we were presented with a big pan of stew. We ate so much that we couldn't even stand up afterwards. That night we had several litres of beer placed before us in the local bars.

We made a late start the next morning. Luckily, the next port Edam, was only about ten miles away. This was reached in record time owing to a strong quarterly wind. The small town of Edam lies up a mile-long canal which is very narrow, so we moored alongside a junk, near the entrance. Yes, a real live Hong Kong Junk. It was 35 feet long and called the "Queen Bee". Ahead of it lay a red-painted "Hina". (There were also two more "Hinas" together at Volendam, one being owned by Mr. N. D. Boon).

Edam is noted for its cheese - making industry, so we rose early at mid-day to see something of the world-famous cheese-market. Maybe we got there too late, but all we could find was an old shed in the village centre with a couple of hundredweight of cheeses on the floor. So much for Edam.

Friday dawned with a very strong headwind, whipping up some very short, steep waves. Hoorn was the next port of call, but lay dead to windward. We reached the harbour after a while, soaked through. The wind increased to gale force, blowing us straight out, before we could grab hold of anything, narrowly missing the tricky breakwater. It took a long time to get into the harbour this time, for the waves were really bad. The water is only about nine feet deep in this sea, so with a 20 mile fetch the wind just picks the water up and throws it straight at you. As we crept past the breakwater for the second time, some old boys threw us a line, and pulled us alongside the wall, until we were safe in dock

Hoorn was a fairly big place with a very nice shopping centre. Needless to say we couldn't afford to buy anything. Here we met a young chap who owned a 50 foot sailing botter. He just about scraped a living by chartering it in the summer. He told us he was sailing it to the nest port Enkhuisen that night for there was to be a students botter race next day. This was great news. Atlast things were beginning to liven up. His botter was to tow us through the harbour entrance. Then we planned to follow thim, as he knew the safest route. The botter was powered by a lump of rust called a model A Ford that first saw light about 1910. We persuaded it to go with a good dose of ether, and proceded in tow. We had planned to sail astern of him, where he could flash a torch as a guide.

Outside the night was pitch black and blowing a gale. However, the wind was astern so we didnt mind. Our friend hoisted his massive gaff, sail and two jibs before cutting the engine and casting us off. We hoisted the jib and tore past him - so much for planning ahead. The distance to Enkhuisen was 11 miles. We got there in 65 minutes just using the jib. The botter arrived twenty minutes later under full rig.

On arrival we were met by 200 Dutch students who were to crew on Botters the next day. We were invited to a party that night in an old Tower. This was great 100 Dutch girls all waiting to try out their knowledge of English on Mark and I. We spun them a few yarns about waves as big as houses etc. and soon I had a couple of nice blondes on my knee. We were persuaded to take part in the race next day. Bets were cast, and a few cases of Heineker Beer were soon at stake.

Next day we rose early, about 12 to find there was an official force 7 head-wind blowing. Every half hour the 15 botter skippers held a meeting to see if the race could take place. Although the botters were fifty to sixty feet long they were very old and rotten and several of them had unstayed masts, therefore a gybe could not be risked. The race was to finish at Medenblick, a little

village 9½ miles up the coast to windward. At 2.30 p.m. the word was given. It was not to be a race, but we had to get there at all costs for a dance and party were at stake. We waylaid six students on board as crew and set off.

What a trip! In the end it was a matter of survival. The sea was white with spume. The wave tops were exploding against the cat. We all got saturated even though we all wore oilys. One of the girls was very ill with sea-sickness. It took 6 hours to beat 9½ miles.

All was soon forgotten as we made our way to the Castle where the party was being held. All the botters that started, finished, but some took over eight hours. That night will go down in history withme - unlimited wine, women and song.

The wind had eased to force 5 on the Sunday, so a race was proposed back to Enkhuisen. My student crew grew to eight due to the previous night I think. The wind was free on the way back so "Ngataki" soon overhauled everything in the race. We had to do a couple of tacks to get in the harbour, when all of a sudden the sails were flapping. The girl on the helm had been looking astern at all the fleet and had luffed up. Before we could get going we were blown hard aground. Well, we came in last in that race after we had pushed into deep water.

Mark and I did a tour of the botters that night helping drink the surplus beer, and saying goodbye to all our friends. Monday dawned very lonely - my heart had gone back to Utrecht University.

We decided to cross the Ijselmear, and visit the east coast ports, so the next stretch was twenty miles, quite a voyage ! The winds were very kind, giving a lazy run all the way. Slowly, another sail came up on the horizon. Here was a chance to show the British flag. It turned out to be a smart steel 35 foot ketch flying the German flag. Theyhoisted their spinnaker in desperation, but as we approached Hinderloopen, the wind was brought on the quarterand we fairly flew past them, giving a friendly wave. I think this hurt their feelings, because that night ashore they only bought us one beer each.

The next day it blew a gale so we stayed in bed, listening to the wind the rain and the hail, and thankful that we were not in the North Sea. The next port up was Makkum. The approach was called Makkum Deep, but as we ran aground twice I think somehow it was misnamed. In this port we met a Dutch sailor off a destroyer. Like every other Dutchman we met, he liked to show off his knowledge of the English language to us. He offered to take us on a tour of all the bars in town. Of course we accepted, offering to do all the drinking if he would do all the paying. This agreement seemed to work perfectly all right.

Friday morning was a bit foggy, and again we were back with a light headwind. All day we tacked south - westwards, following the massive dyke which separates the sea from the fresh water. There is a motorway built along the bottom of the dyke, and all day we watched an endless flow of heavy lorries towing trailers. They were much bigger than British trucks.

At the end of the dyke were the locks, in a port called Den Oever. The locks open for the last time at seven p.m. with the help of the trusty seagull we pushed on against a failing wind. It had taken eleven hours to tack twenty miles. We reached the locks on time, just as it was getting dark. Once we had gone through the swing bridge which was just ahead of the locks, we were back in salt water, our natural element. However, a hundred yards past it we ran aground in soft mud like custard. In the end we managed to lasso a light bouy quite a distance off. With the help of the wash from a passing trawler we pulled the cat into deeper water. Not taking any more chanceswe motored slowly into the dock and moored up alongside a trawler.

The main industry of Den Oever seemed to be sport fishing, every vessel that floated was commissioned by fishing parties. 7 o'clock Saturday morning we were woken up by much shouting from hundreds of fishermen laden down with rods and flasks and transister. Over 60 vessels over 70 foot long put out that morning packed with fishermen.

The next leg of the cruise was 10 miles to Den Helder, across the Waddensee, everybody we met told us to be careful as this place was treacherous with strong currents, sand banks and shallows. The channels are very poorly marked and confusing. I had been worried about this place for some time, but fortunately it was flat calm and foggy. We had to use the outboard all the way using about a gallon of fuel. We followed the foghorn into Den Helder and groped our way into the Texel ferry-basin. This sea posrt is the headquarters of the Dutch Navy and was full of all types of vessels of war. The next morning, Sunday, a naval chap said we could use their private yacht harbour as it was dangerous to be near the ferries in the fog.

Our total assets now totalled 3/- and we had run out of bread, so we went on a Dutch minesweeper and asked the boy on watch if they could sell us a loaf of bread. He didn't understand English so went below and fetched a chap with a few gold rings on his sleeve. I asked him the same question. He must have misunderstood and thought we were destitute, (we still had three bob) because he said something to the cook and invited us aboard. We went down in the galley where we selected 2 big steaks out of the fridge and as it was just after dinner had all the veg that was left. Things were looking up! Then into the mess to meet the crew and eat our dinner. A crate of Heinniker was placed before us to help wash the meal down, also a tin of 50 cigarettes each. We sat and talked and drank with the crew all afternoon. Mark went on deck at 5 p.m. and declared the fog had lifted and the sun was out, we decided to set sail and head for home in case the fog came down again that night. My memory was a bit blurred but I remembered wedidn't have any bread. I asked the officer who sent down three loaves. Then he asked"Any Butter", I said "No", "Cheese", No, "Meat, No, "Eggs", No. He let us look through the food lockers and take whatever we wanted. We certainly did,we'vestill got some Dutch food on board now.

We staggared down the ladder onto "Ngataki" holding our bulging coats full of goodies. After drinking a toast to the Dutch Navy with our last bottle of Heinniker we cast off and headed through the Texel Gat into the sea. The course home was W.S.W. and thats exactly where the wind was coming from. We threw the log over, adjusted the sails for self-steering and selected a book apiece and settled down for a long read.

The distance from Den Helder to Harwich is 140 miles. Nothing exciting happened in the first 48 hours except we caught 64 mackrel in one day. They were coming out 6 at a time. It was MURDER. The wind stayed light from the same direction and visibility was poor. We changed tacks a couple of times, but the boat always steered itself. There were quite a few ships about at night, one or two I had to scare off with my torch. I have some white flares "just in case", but they always saw my torch. I had set the course for the Shipwash L.V. which is off Aldborough.

The first land we saw was Southwold which came out of the fog $\frac{1}{2}$ mile ahead, pretty good navigation, for we hadn't touched the tiller for 55 hours. It was midnight by the time Orfordness lighthouse was reached. The tide was now against us so we intended to anchor under the lee of the ness and get some sleep till the tide came favourable. The headwind was quite strong and combined with a very strong tide the anchor wouldn't hold in the loose shingle bottom. This was rotten luck, We were looking forward to that sleep. We decided to run back and try to get in Southwold harbour, a pokey little place. We were surfing along now at great speed, trouble was it was the wrong way. Southwold soon came up, but there were two survey ships blocking the harbour. We tried to sneak in but a white flare was fired at us as a warning.

"Ah, well", study the chart. Lowestoft next stop. The wind was dropping but we had the tide. We felt our way over a sandbank which came up to 6 feet from the surface listening for breakers and followed the coastal channel. About 4 miles short of Lowestoft the wind died completely so we put the outboard on and finally moored up in the harbour at 7 o'clock in the morning. Were we glad to hit the sack. 60 hours to do 160 miles.

Lowestoft was a right dump, 6 bob a day to have our gunnels rolled under in the unprotected harbour. The light S.W. wind persisted until the weekend when it changed to Easterly force 6. With the wind in this quarter it was impossible to get out of the harbour. We decided to hitch-hike home and come back next weekend. Four weeks had passed since we had left Ipswich, this reason alone cost me my job, still I had plenty of time on my hands now.

Next weekend it was foggy with a light S.W. headwind as we left Lowestoft. We had scrounged a tow out with an old smack. Once clear of the harbour they cast us off and we commenced tacking down the coast. The boat was steering herself of course, so we started reading again. That night we drifted past Orfordness Light House, serenaded by the Foghorns of the Shipwash, Cork and Sunk Light Vessels. This was another record slow passage. We reached Harwich after 20 hours, after covering 38 miles.

Apart from the winds, the cruise was a great success. Nothing failed on the cat at all, not a drop of water leaked in through the top or the bottom. The mainsail stretched a foot along the luff, I had to move the downhaul track down, now I have to crawl to get under the boom, one shackle pin came unscrewed on the mizzen shrouds, but luckily we were able to replace it in time. Now my dreams are reality I rather fancy a lengthy trip up the Baltic Sea visiting the Scandinavian countries this coming spring. This time I hope to have a female crew. Any girls interested? Johnny Leach, 104 Montgomery Rd., Ipswich, Suffolk.

Nylon sheathing (and de sheathing) Tawhiri

In the last edition of Sailorman it was noted that I was using parachute nylon to sheath the hulls of my Oro TAWHIRI. Certainly that was the plan, but for the benefit (and perhaps warning) of fellow builders I feel that the full story should now be told. My reasons for choosing nylon were those advanced by the makers of the Cascover process (Much too expensive for me). Nylon is, I believe superior to glass fibre in that it is more flexible and can be stretched. It is therefore less liable to part company with the timber. Simply I was following current trends in the age old history of attempts to satisfactorily protect timber craft from the ravages of worm, weather, fungi, and abrasion. We attempted to obtain suitable nylon at reasonable cost, without success. If both hulls are to be fully sheathed, some 1200 sq. ft. are needed. Finally I discovered surplus parachutes of very light nylon £3. 15s. from Thos. Foulkes). We also bought 56 lbs. of Aerodux 500 resin and hardener for about £14. This is a glue which is compatible with nylon, as well as with wood and many other materials. It is tolerant of high moisture content in timber. The parachutes were cut into pieces of various shapes, usually about 3 ft. by 2 ft. We mixed a small quantity of glue and tentatively tried a few test pieces. Bubbles of air or glue were removed with a cloth pad. The nylon stretches easily on the bias and can be usefully (or accidentally) distorted to suit odd corners. A heavier cloth might need stapling in position while the resin sets. We quickly discovered that the glue spread was a critical factor. If the glue was allowed to penetrate the cloth, blistering was inevitable during setting. Best results were obtained with a sparse glue spread, but with a fast glue, speed was essential, and some surfaces which appeared to be perfect, later developed blisters. On reflection, I believe that temperature and especially humidity are critical factors, and that factory conditions with a temperature over 60 degrees F are desirable. Perhaps the Scottish Summer is not the best environment for this task. Perhaps someone will tell us how TEHINI was nylon sheathed. I believe also that the parachute nylon is too thin for the task, alsthough promising a good finish. I persevered for two days, at a slow pace, I then called a halt, and read every piece of literature on timber protection that I could find. Since only about 25% of the sheathing was satisfactory I decided to tear it off. I then spent three painful days with a coarse Cintride disc sander fetching the nylon, and the extremely tenacious resin off. This glue is so tough I wonder it isn't simply painted on as a sheathing.

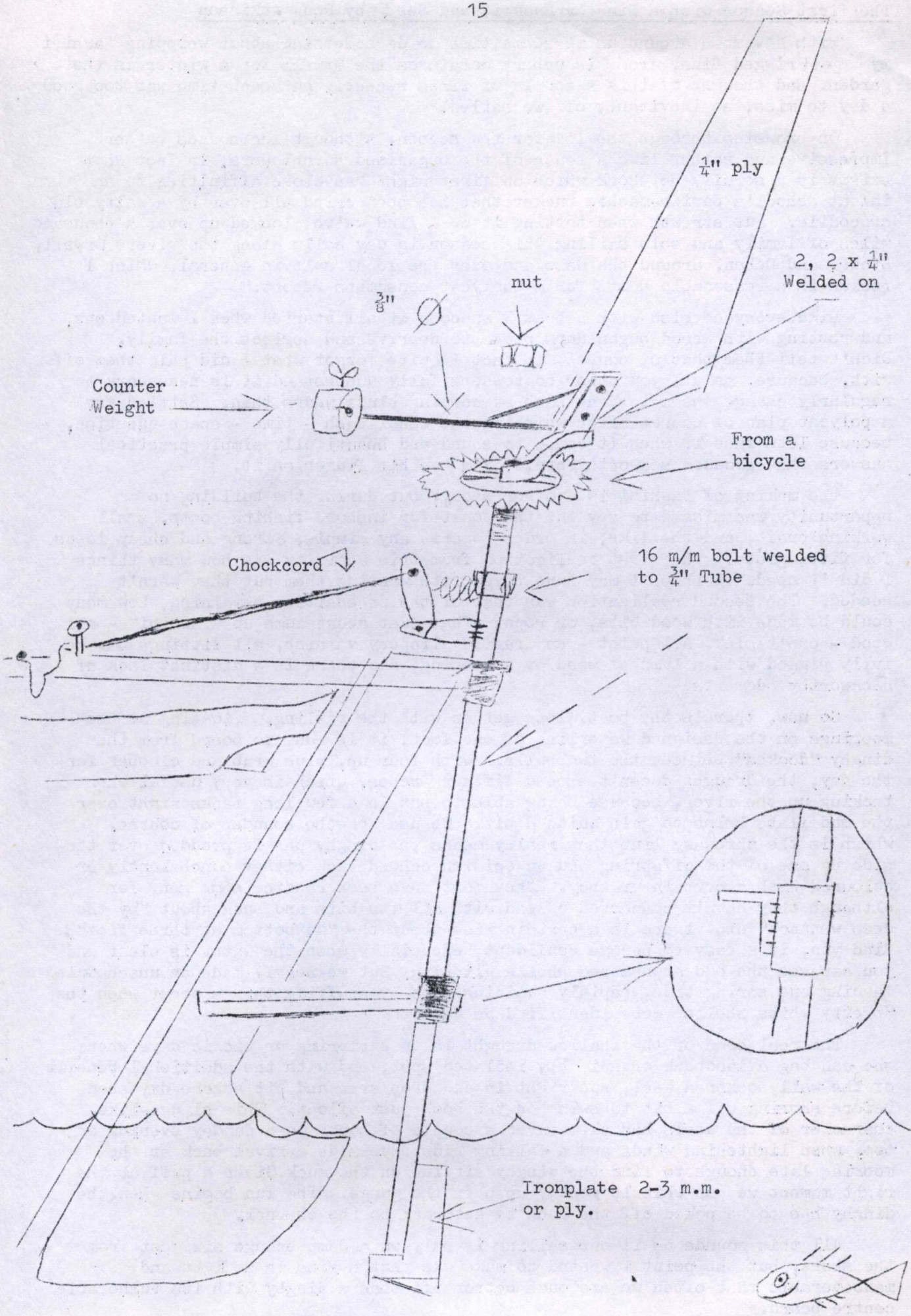
So how are we protecting TAWHIRI? It seems to me that the fault of every sheathing material is that if it does fail or separate from the timber, then that timber is exposed to pockets of trapped water, which can accelerate decay by all the familiar means. Paint scrapes lead to the same result of 100% coverage is not maintained at all times. The bare wood must therefore be protected as a last line of defence. TAWHIRI is getting two coats of green CUPRINOL, which repels the larvae of borers, and prevents rot, followed by two coats of aluminium primer to isolate the Cuprinol, and the usual undercoats and topcoats, or antifouling. In this way we have, I believe protection from all but serious abrasion and neglect. Incidentally, the entire boat is getting Cuprinol treatment, since rot can easily destroy internal timbers. The clear Cuprinol can be primed with conventional primers.

Painting all those deck slats seems too tiresome a business. I hope to dip each slat in a drain pipe of clear Cuprinol (there is a water repellant variety). This treatment will need annual renewal, but will give good protection. We dont object to bare weathered Douglas Fir decks. Repainting would be a real chore. What of the nylon? Foulkes' advert says that it has "numercus uses". So far we have dinghy spinnakers, hatch ventilation sails for hot climates, a Q flag (or a thousand), a windsock, awnings. I may try a complete parachute as a spinnaker. And of course there are many uses for the 10 ft. lengths of nylon cord. If you ever happen upon an ORO with a preponderance of yellow items it'll be TAWHIRI. After all we have 100 sq. ft. yet!

Paul Granham.

Self Steering gear for Tangaroa by Jannek Cortsen. (see illustration over)

A servo-rudder, controlled by a windvane, is fitted to theport rudder. The starboard rudder is cabled off and used as a trimrudder, and when trimmed, it is lashed. The boat self-steers now very well on all courses, and in most conditions! On our holiday cruises we always used the wind-rudder, and in fine weather we sunbathed on the deck. When it rained we read or slept in the cabins. On a singlehanded trip, I was very glad of the selfsteering arrangement.


¼" ply
2, 2 x ¼"
Welded on
nut
⅜" ∅
Counter
Weight
From a
bicycle
Chockcord
16 m/m bolt welded
to ¾" Tube
Ironplate 2-3 m.m.
or ply.

The first Season with a Hina or Suck it and See ! by Doug Atkinson

With November around us it seems time to do something about whipping Tawhiri my spritrigged Hina, from his watery domain on the Orwell for a winter in the garden. Had thought of this a couple of times recently but each time was too good a day to miss, so inevitably off we sailed.

On browsing through the log for the season, although log sounds rather impressive and rather like a touch of the organised Hornblowers, in fact what exists is a scruffy notebook which on first sight has close affinities to an infant school's papier-machee bucket that has been cried all over by a salty old crocodile. But strewth when totting it up I find we've clocked up over a thousand miles of family and solo sailing this season in day sails along the rivers Orwell, Stour, and Deben, around the Naze and over the local salt in general, which I reckon is a reasonable basis for a "polycat consumers report."

Like everyone else with a boat I suppose it all started when I wanted one, and rotting with greed began dark plots to deprive and neglect the family. Didn't tell them that of course, in fact I quite forgot what I did palm them off with, because, as all you other boatowners fully understand it is necessary to regularly change the spiel, as each succeeding bluff wears thin. Settled for a polycat plan of course after weighing the usual cash - time - space question, because lets face it when it comes to sound and beautifully simple practical answers that produce seaworthy craft, Jim has his finger on it.

The making of Tawhini is another story, but during the building no opportunity was missed to spy out the coast for inshore fishing boats, small working craft, and the like; in order to crib any simple, strong and cheap ideas for fittingsetc. The first realization from this activity was how many things I didn't need. Perhaps I may have toyed with wanting them but they wern't needed. The second realization was that of the necessities remaining, how many could be made with wood bits, or rope. That just about sums up "Tawhini" - all wood - can't sink, all paint - no fragile slippery varnish, all fittings can be fully rigged with a lump of wood or a lashing; and there is a distinct lack of nickworthy oddments.

So now, there's the boat, lets get on with the sailing. Floating at the moorings on the designed waterline of one foot, it is easy to board from the dinghy "docked" between the two hulls. With four up, plus grub and clobber for the day, the draught doesn't exceed fifteen inches, which is very useful when tacking up the river, because being able to put in a few long tacks right over the mud flats helps to gain quite a bit. We use an echo sounder of course, which is the throwawy line that really means the dinghy oar is prodded over the side by one of the offspring and an opinion echoed back either nonchalantly or coloured with a certain urgency. They must have been reading some gen, for although they havn't concocted a lead with all its bits and sung about "by the deep whatnot" etc. there is a certain ring about the "No bottom at three feet" ! Mind you, it's easy to become confident, especially when the water is clear and you can see the odd stones and shells glinting. But we nearly made an unscheduled landing one spring tide, rapidly avoiding same by stuffing things about when the "pretty white shells" were identified as daisies.

The real boon of the shallow draught is on exploring or picnic days when one can bag a sandbank or suitably isolated spot, and with the additional benefit of the well sockered keel, run right in and drop crew and kit ashore dry shod before shoring off a bit to swing on the hook just afloat. This sledge-like character of the keels has also saved a couple of hours on a Sunday evening or two, when lightening winds and a falling tide have made arrival back at the mooring late enough to find the dinghy sitting on the muck.Given a puff at the right moment we can whizzle gently up over the gunge. The fun begins when the dinghy has to be poked off the bank to get back to the channel.

All this sounds as if our sailing is only on a damp sponge six feet from the shore, but the point I wanted to make was that a Hina is so light and manoeverable that often we are much better off than a dinghy with its vulnerable centre board.

Probably the most striking attribute that invariably makes big impression upon various pals (who between them use a wide variety of the ordinary sort of one-legged wobbly boats) is the incredible stability and smoothness, which is so relaxing that it tends to reduce their impression of the speed untill we skitter past struggling craft indecently exposing their barnacled buttocks.

"Them cats is slow goin' about" say the critics "can't point either", and so on. In fact the Hina is very handy indeed, and can heave to or be sheeted to get on sailing herself to windward without any rudders at all. Doesn't spin

round of course, but if sailed properly on the wind and given a little puff round with the jib backed, makes a clean steady job of it. When the wind drops light it is easy to stop in stays as there is relatively little weight to give a bit of way; but this has only happened a couple of times this season, and the lack of weight also means the way is quickly picked up again.

There's not all that much in it as regards the pointing question and if one keeps a shade freer the bonus in speed is so much more worth while that I have found an odd extra tack in practice has been no disadvantage. After all, lets not confuse the issue: you can point as high as you like for as long as you like but the only object of the exercise is to get to windward, and that is elapsed time over a straight line from A to B, nothing much to do with distance sailed or numbers of tacks as long as one gets to B. first. We have nearly always managed it with the speed of the cat normally being by far the greater factor.

I think catamaran stability helps here agin by keeping our apparently less efficient rig at a steadier working angle all the time. This allows Tawhiri to convert the maximum forward drive of gusts into quite spectacular shove-in-the-back bursts of acceleration. A monohull has to be continually cocking its rig all over the place while it heels, or screwing its hull about in the water from luff to luff, all of which must subtract quite a bit from the intended benefits of higher pointing ability.

Our sprit rig is of course not claimed to be as "efficient or close winded as lego'mutton main stuffed full of battens and jammed up its marconi mast, but with sput vangs to play with I bet we don't lose as much in sailing conditions as might be inferred by calculations on paper. The brails are a boon for stowing the mains'l and its a great advantage to have everything permanently hooked up to the sticks and ropes, ready for a quick get-away at the shake-out of a couple of lines. Mind you, a few months back I wouldn't have been too happy about them, but the answer has nearly been found by applying the mixture of experiment, and a potted investigation of barge rigs and the like - liberally greased on its way with a seasoning of salty obscenities. I say 'nearly' because due to the smallness of the rig there is insufficient weight in the sail to prevent the light-as-I-dare terylene brails from sagging down and putting a little curl in the leach in light winds.

Handling at sea is a joy, and I'm very pleased with the way that wave motion is ironed down, the tilt of things being merely relevent to the normal swell, plus a couple of inches each way. The bows are seductively fine at the waterline, and I had wondered how much the overhang and flare would lift, but there have been several testing, blowy punches about in the steep faced wind against tide waves and we havn't buried a bow yet. Plenty of water flying about over the whole outfit, yes, but only lumps of spray that come from the smashing outwards effect of the flare as it smoothly lifts the bows to slice through the crest.

All this adds up to a craft with which I am very happy, and has proved to be an excellent all-rounder, capable it seems of outsailing everything in his stride and putting up with a hell of a lot of knockabout family use. All puff boats have to make best use of what weather turns up of course. One enjoys recalling the exciting speedy bits, but overall conditions a Hina has proved to me to be a good bit more capable of getting the best out of things than a lot more so-called sophisticated craft, which appear to be considerably more expensive, and undoubtedly more complicated.

To support this opinion I would like to end by recalling a day trip in the mixture of conditions one would meet during the usual summer weekend - pottering, coasting round the corner to explore the next rivers etc. Leaving Ipswich mid-morning with light winds I sailed down the Orwell and around Harwich harbour to see what had come in before continuing out past the shipping channel to make an arc out to sea, and have a look at the Cork light ship. About four miles off Bawdsey I decided to shape up for the mouth of the Deben to spy out the bar which I had heard was changing, in case it might be handy knowledge at a later date. It was full ebb, and to kill a bit more time until low for more bank to show up, I carried on up the river.

The wind was now deadon the nose so it meant tacking all the way over the tide and current, earning the later run and reach back to Harwich before the final eight miles to windward again up the Orwell to moorings by tea-time. This made it about forty odd miles in just under the eight hours. The usual ribald scepticism was at first expressed such as:- "You can't tack over the Deben ebb, it runs at four or five knots!" - "especially in an unhandy cat" etc. or "The pilot says you need a six horse motor to stem it", and so on. Anyway, since then

it, and several other similar day trips have been well substantiated by various acquaintances around the coast one swops pints with. So, perhaps it wasn't really necessary to regard this as a challenge and make straight for the Deben again next day, but it was delightfully satisfying to have tacked past the narrows again and be called across to stick our hook in the bank by members of the local club, who had been watching. They treated us to their hospitality too and had a good poke over Tawhini. Right chuffed we were, supping our pints and sneaking little pride-of-ownership, or rather- partnership glances at his brailed up sprits'l showing over the bank. After all, fourteen miles in under two hours for a fully loaded family day-sailer wasn't too bad was it.

Testing "TEHINI" By Geoffrey Norwood

On a cold, overcast Sunday in late November with a forecast of force 5 - 7 Easterly it was decided to take TEHINI for another of her series of trial sails. With the rising tide the anchors were loosened from their grip in the Deganwy mud having been well embedded by three weeks of gales. The engine was started and the final mooring line let go.

TEHINI nosed effortlessly out from the dock into the full force of the flood tide. A slight increase in power to a little under half throttle saw her cream down the river towards Conway Bay at a steady 8 knots. As TEHINI approached the "perch" sail was hoisted. First the jib, then the mizzen and even under these the engine be came unnecessary and was cut. Then the500 sq. ft. mainsail went up and was sheeted home with amazing results as the Wasp registered 12 knots. The wake was clean and straight, the leeway virtually nil and this with the apparent wind well forward of the beam and food and water on board for a three month trip.

The course was altered to clear the Orme, although TEHINI passed through the wind shadow of this 700 ft. hill. It was only on clearing the Orme that the full effect of wind and sea were felt. The wind was a good force 5, possibly 6, with a nasty Irish Sea chop combined with the effect of the tide race off the Orme. The waves were of irregular pattern six to eight feet in height but very steep and occasionally breaking. As TEHINI rose to the seas, it was apparent that the full working rig was a little large, so a single reef was put in the mainsail. The ease of this operation on the Junk Sail has to be seen to be believed. The reef took less than ten seconds to put in and immediately the relief to the boat was felt. Still at some 10 knots, she rode beautifully over awkward seas with just an occasional wave sending water through the slatted deck. Even in these conditions the inevitable cup of tea was served and the skipper sat at the wheel, his mug of tea on the nearest cross-beam, eating a cheese sandwich.

It was decided to test TEHINI still further by gybing. To carry out a standing gybe in that wind on most boats carrying 900 sq. ft. of sail is to court trouble, but TEHINI answered easily to the helm, bore away and executed a remarkably quiet gybe, so great was the reduction in apparent wind speed.

Course was then set, close hauled, for the main channel of Conway. Quickly, the comparative shelter of Conway Bay was reached. Very rapidly the land came closer and as the Channel was reached TEHINI was tacked towards the harbour. Another short beat and the engine was started as the perch drew near. On rounding the perch, sails were lowered and stowed. Only too soon, was the stern anchor let go, the stern mooring picked up and the bow line taken ashore with dinghy. TEHINI was back home ready for preparations to continue for a much longer voyage.

The overall impression is one of admiration both for the designer, and for the way that such a huge boat handles so easily, rather like a large dinghy. There is a feeling of power and security. This is a truly worthy vessel to follow the clipper route and sail in the seas of its ancestors.

Advertisement: Multihull Builder and sailor builds Wharrams' catamarans.
Peter Louet, Carlingford, Eire.

Notes on the construction of my "Oro" - Bob Rochester.

First, personal details: My wife and I have always been unsettled people with a constant desire to see new places and countries. We started roaming by buying ol cottages, spending a year renovating, and then moving on. This rambling tended to effect my career as a Civil Engineer. Employers were looking hard at my average of one new job per year. This, combined with our desire to travel, led us to decide on buying a yacht to live on.

Alas, the price of a seaworthy and comfortable yach was way out of our range. A do-it-yourself boat seemed to be the answer. After much study and homework a Wharram design seemed most appealing. The "Oro" was particularly useful, giving good accommoation, and with a few additions this yacht could be used as a full-time home. She could contain domestic facilities not normally found on a boat.

The size of the boat posed problems in finding a place to build it. We spent weeks exploring most West Coutry boat yards, and were often treated with incredulit or contempt. It seemed that professional boat builders dont accept that the layman can construct anything better than a pram dinghy. Anyway, at last a firm of boat builders, Hockadby Bros., of Newton Ferrers, viewed out case sympathetically, and with keen interest agreed to let us use a large storage shed for the summer season. This association proved most beneficial to us in the way of expert advice, and the use of a full range of machinery.

Construction: Construction was very straight forward and any problems were usually created by variations from the drawings. Some professional help was needed with the fibre glass sheathing and a lot of effort required in rubbing the glass down to an acceptable finish.

Variations to the specified Design: The keel: To provide more tolerance in obtaining a first class joint between the hull planking and the inner keel a 1" timber batten was glued and screwed to the inside leading edges, and when bevelled in with the keel gave a surface 2" wide. This addition was carved out along the inner stem and stern posts, but in these situations was more essential due to the stringers being notched into the posts in lieu of being fixed to the edge and nogged between.

The dining area: The deck level above the aft port cabin was raised by 9" to enable six persons to sit around a two-sided table in comfort. This adaptation was accomplished by making the cupboard front into an extended bulkhead, at high level, one end, and making a laminated beam 14" deep at the other end. The cabin top thus formed was covered in cast fibre glass sheet. Although only translucent, this gives tremendous light, and possibly, excessive heat from the sun - some kind of shade or blind might be necessary.

Water tanks: The bilge in each midship cabin was lined with 1" softwood and sheathed in fibreglass. A screw down lid, also fibreglassed, made this void into water tanks with a total capacity of 170 gals. Baffle boards were considered necessary at 2' centres.

Chartroom: This was considered more useful if directly accessible from the steering position to this end, the starboard aft cabin was made watertight at bulkhead 3, and a raised cabin top with hatchway was installed in front of the aft connecting beam a well 12" deep was formed with self draining qualities. The result is that the helmsman can sit on the aft beam chocks and with a steering wheel mounted vertically against the chartroom cabin top, may view, via the additional hatch, into the chartroom. Instruments will be sighted inside the chartroom and a perspex hatch-cover will give a full view to the helmsman. A plywood wheel house may be constructed around the steering well, if this will not seriously impair performance.

Shower: The starboard forward watertight compartment was sheathed internally with fibreglass and will be used as shower-room and drying area.

Various Items: Metal masts and spars were considered economical in the long run. Fibreglass sinks and basin were cast on site, as no suitable sizes could be purchased. Brass sliding ports give light and ventilation. These are not guaranteed watertight under immersion, and will be supplemented with plywood deadlights.

Future Plans: It is anticipated that the cat will be used to charter and thereby earn sufficient capital to finance our trips.

Next season will be spent in the Plymouth area and will be considered a trial period both for the boat and ourselves. I will be sitting for a skippers certificate next summer but the practical experience can, we hope be gained in

sufficient quantity during the coming season, to equip us for more ambitious journeys.

Can anyone help Bob Rochester with the following?

1) The power required for moorings negotiation and estuary use only, by way of outboard motors. We are contemplating dual 4 H.P. seagulls. Has anyone tried this combination?

2) Can the vessel be made to self-steer? Can anyone who has tried it tell me what equipment is necessary?

3) Can any advice be offered on the installation of lightning conductors?

4? In a heavy sea has anyone been able to tell the maximum angle of heel that one's masts may achieve? This is required to be able to determine if any additional radar reflection gear is necessary in excess of the alloy masts.

Bob Rochester's address is: "Bermudiana", Yealm Road, Newton Ferrers, Plymouth.

He obtained his aluminium masts and booms for £295, from:- Hurley Marine, Valley Road, Plympton, Plymouth. The price is approximately the same as that for timber, including roller reffing gear and goosenecks.

TIPS

D. Palmer, Hina-builder of S.E. London, has discovered a cheap and simple substitute for the usual expensive G clamp:- a FRET CLAMP can be bought in most tool shops and ranges in size from 2" to 5". The price of the largest size in 2/6d. This clamp is not as strong as the G clamp, but he has found it adequate for glueing his "Hina".

D. Kesby, of the Haven Nursery, Woburn Sands, Bletchley, Bucks, would be glad to have enquirers visit him to see the building of his enlarged (32'2") Tane. He uses a home-made rule, made of a 42" sail batten, marked out with 36 divisions, and each division into 8, which he says makes building very straightforward. His hulls will have extra stringers, the ply will be $\frac{3}{8}$, and the beams (which will be lashed, not bolted, to the hulls) will be proportionately bigger. Each hull will have self-draining cockpits.

Paul Garnham who sent the information about parachute nylon , also says of his "Oro"- "I found that to double up the inner keel was most helpful in giving the ply skin a 2" bearing sunface, and that the stringers were more easily and firmly fixed to the inner stem and stern posts, if those were doubled by blocks at points where the stringers are attached.

JIM'S BOOK

Would anyone like to order James Wharram's book, title "Two Girls, Two Catamarans" through the Association? If so, please send 30/- (cost of book) and:-

10 shillings, if you live in Europe,
1 Pound 10 Shillings if you live in Australia, New Zealand, Asia.
1 Pound if you live in W. Indies, S. Africa, U.S.A. or Canada to:-

Miss L. Scrutton,
s/c Rongo,
Post Restante,
Deganwy,
N. Wales.

Jim Andrews in "Practical Boat Owner"

Those of you who read in your last "Sailorman" about journalist Jim Andrews' articles on Catamarans in Dec. 68 - Jan '69, and of his subsequent visit to Polynesian Catamarans, following Jim Wharrams angry protests, will be glad to hear that he wrote a fair and favourable account of Jim and his designs in the July issue of the magazine this year. Write for a copy, to "Practical Boat Owner, Tower House, Southampton Street, London, W.C.2.

The Last Chapter of the Chroniclesof Anuanna - Ken Paterson

1) In the year that Jim did launch the ship Tehini, from a place high and lifted up, behold Ken did put to sea in Anuanua once more.

2) On board were two sailors, by name Derek and Max, as well as many maidens of divers ages. Now Derek and Max did both have beards and were therefore real sailors.

3) Because of this and the exploits of Derek and Max below the sea in the mighty submarine Polaris, did Ken determine to do all things well.

4) However, this was not to be, and Ken did sail the Anuanua with great alacrity onto the shore.

5) By dint of much pulling on ropes, and with the directions of Jim, (who hurled advice in a loud voice across from the mighty Tehini), was Anuanua turned towards the sea.

6) Thereupon did the sun shine and the wind fell to naught. All therefore did lye about the deck as dead men, or did stuff themselves with the food which the maidens did supply. And one there was who did eat the skin of a banana so that none should slip thereon.

7) But soon the wind arose and the rain came and the waves did toss Anuanua about. Then did the faces of some become a strange green, and they did move towards the sides of the boat.

8) Then did Ken set course for a place where the sea was narrow between the Isle of Anglesey and the great rock Puffin. The wind was favourable, and the waters parted, and with streaming wake did the shippe fly towards the passage.

9) Then did those aboard sight a great and mighty barge of vast proportions which pulled out from the shore and did make the same course as Anuanua.

10) Then was there great alarm for it did appear that the great barge would all but fill the passage at the same time as Ken would pass through it. Ken did fear to show terror lest the sailors did think he had the heart of a small hen, and he did press on, grasping the tiller in a vice-like grip.

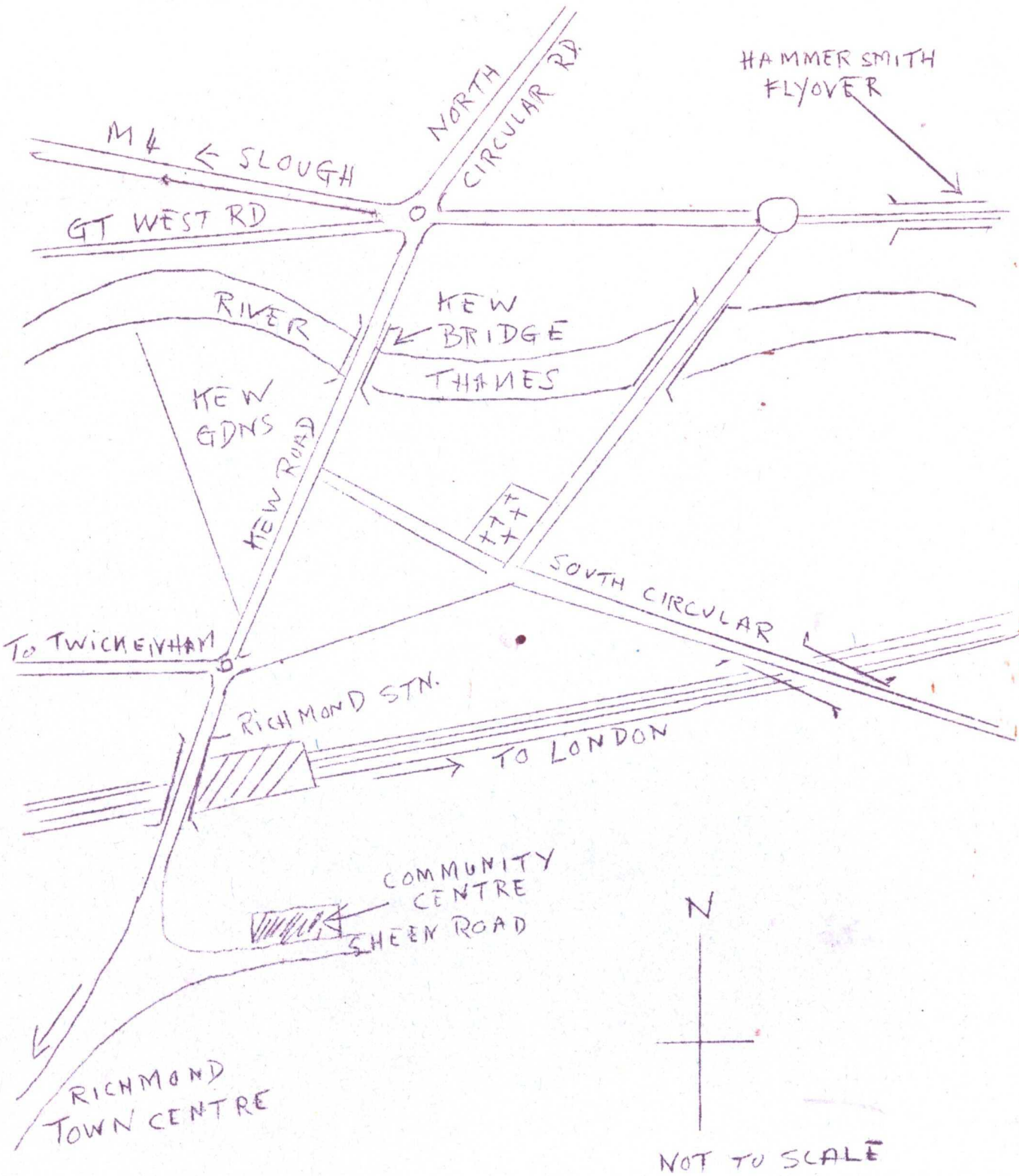
11) All aboard did hold their breath as Anuanua sped before the wind and came alongside the great barge, even between the lighthouse and the clanging bell which marked the narrows, and she did well nigh scrape the rocks which are the danger of that place.

12) Such was her speed that she soon did pass the danger and ploughed on to the still waters and calm seas which did lie beyond.

13) Then was there much rejoicing, and the green faces did once again turn pink.

14) But behold the dangers of the voyage were not yet done, and the wind did an away again and a fog did rise on the face of the waters. The land did melt away in the vapours and none could be seen.

15) However, by the skills taught by Jim did all return safely to the haven and Anuanua ..... (Here the chronicles become indecipherable, and there appear stains as of tears on the ancient parchment. It is believed that one of the sailors, even one with a beard, took away Anuanua and the chronicles ceased.



POLYNESIAN CATAMARAN ASSOC.

A. G. MEETING

Will be held at 8 p.m. on Saturday, 10th January, 1970 (first Saturday of the Boat Show) at The Community Centre, Richmond-upon-Thames.

Light Refreshments will be available during the evening and it is hoped there will be a Film Show after the Meeting.

The Centre is only a few minutes walk from Richmond Udergground and B.R./S.R. Stn. Upon leaving Station turn Left, take first main turning on Left and the Centre is a few yards on Left.

For those travelling by car there is a Car Park at the rear of the Centre for directions see map which I hope is self-exphanatory.